

STUDY OF THE IMPACT OF CERTIFIED STAFF PERCEPTION OF DIGITAL  
CITIZENSHIP UPON TEACHER PROFESSIONAL DEVELOPMENT

A Record of Study

by

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## ABSTRACT

This record of study examines the relationship between certified staff personnel perception of digital citizenship and the impact upon professional development. Quantitative and qualitative data was used to examine responses to teacher familiarity with the concept of digital citizenship and status of teaching digital citizenship culminating with the analysis of how teachers help other teachers with digital citizenship skills and lessons.

Using a coded and confidential survey of the participants resulted in minimal familiarity in the term digital citizenship. After a series of short professional development sessions using materials developed by Common Sense Media, familiarity increased. An added result was the increase in participant view of self as a technology user and an increase in the use of technology in the participants' classrooms.

An interest in continuing professional learning was voiced by a small group of participants leading to a continuation of the study using a focus group. The group continued to meet to collaborate on uses of technology in the classroom, digital citizenship lessons and observations of skills needed by students. School administration further supported the study through the recognition of the participants' interest and need for continued professional development.

## DEDICATION

This work is dedicated to the memory of my father, Wayne Kidd, who always taught me that I could be anyone I wanted to be with hard work. I will never forget the pride I saw in his eyes the day I received my acceptance letter to this program just a month before his passing.

“If you’re going through hell, keep going.” --- Sir Winston Churchill

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## NOMENCLATURE

ALP	Advanced Learning Program
ELA	English Language Arts
PBIS	Positive Behavior and Intervention Strategies
NBPTS	National Board of Professional Teaching Standards
NBCT	National Board Certified Teacher
SWD	Students With Disabilities

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# CHAPTER I

## INTRODUCTION

### **The Problem Space**

The majority of the students communicate using digital language terminology including words such as app and Googling entering into everyday conversations. The digital or technological language is reflective of the communication revolution in which students have the ability to transfer knowledge and synthesize ideas. By supporting or developing our students' digital language, educators have the opportunity to encourage growth in all students, some of whom may have difficulty meeting or exceeding in their goals. Our children must be prepared to compete globally in a digital society, not only as consumers of technology, but also as producers.

With immense accessibility now available, students are expected to be skilled in use of digital tools when they enter intermediate grades (Wiggins & McTighe, 2005; Shiro, 2013; Prensky, 2013). Therein lies a two-pronged problem: students do not consider their online identity as part of their student persona (Ribble, 2016; Common Sense Media, 2016; Craft, 2012) and teachers are feeling that they are being forced to incorporate technology into lessons without adequate time or professional development (Darling-Hammond, Chung Wei, Andree, Richardson & Orphanos, 2009; Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur, 2012; An & Reigeluth, 2012). In the school examined, teachers feel that there is an implicit expectation that technology is to be used given the building principal has noted the inappropriate use of technology has

risen; yet, the use of technology is an expectation of every teacher in the building specifically tied to some teacher evaluations. Consequently, teachers expressed the need for students to be trained with the expectations of how technology needs to be used at school and at home although not all teachers are familiar with the terminology of digital citizenship defined by Ribble (2016) as “a concept which helps teachers, technology leaders and parents to understand what students/children/technology users should know to use technology appropriately.”

Within the classrooms examined, teachers vary in their understanding of digital citizenship skills and the impact upon student achievement. Some do not believe that it is the responsibility or place of the teacher to teach digital citizenship skills or create a technology rich classroom environment. Others question the importance of digital citizenship skills within the intermediate classroom or even the use of technology in lessons. Still others advocate for the changes in curriculum to incorporate digital citizenship skills within classroom instruction using technology. The perceptions of these groups differ greatly.

## **The Problem of Practice**

### **Context/Setting**

Little Intermediate School\* is located in a suburban town of outside the metro area of major city in the Southeastern United States. The County School District\* is comprised of 114 schools including 67 elementary schools and is the second largest employer in the county. According to the 2010 census, total population of the town being served by Little Intermediate is 32,000 with a racial distribution of 58.9% white,

22.3% African American, 10.8% Hispanic, 5% Asian, and 3% Multiracial with an average household income of \$62,146. The suburban community has many large subdivisions of neighborhoods with most homes having at least one adult commuting to city for work.

Little Intermediate serves about 750 students in grades 3-5. According to the County School District records, the staff consists of 54 certified teachers, seven paraprofessionals, two administrators and four support staff members. Staff members are well trained with 20% being special education certified and 70% holding advanced degrees. Turnover is limited to retirement or relocation with the average teaching experience within the building being over 15 years and 57% of the staff have been with the district 10 years or more.

As reported to the state government, 44% of student population is on free or reduced lunch, 10% is limited English proficient, and 15% is classified as a student with a disability (SWD). Within the school, there are nine fifth grade classrooms with an average of 29 students each, 10 fourth grade classrooms with an average of 26 students each and 13 third grade classrooms with an average of 25 students each. The school also has four classrooms with profoundly disabled students diagnosed with severe learning disabilities. With the exception of seven students who are a small group in the district's only classroom for Moderate Intellectual Disabilities and Autism, all special education students are served in co-taught classrooms with one general education teacher partner teaching with a special education teacher.

Although nearly half of the students at the school qualify for free or reduced lunch, most have ready access to technology at home (Staff Communication, March 2015). Furthermore, these are the same students who are very active on social media sites, often without parental supervision. Parent involvement is tenuous with the change in administration and implementation of new policies, including the implementation of the Positive Intervention and Behavior Strategies (PBIS). Some parents have been very vocal in their dislike of the program; however, teachers are encouraged by the increase in student performance and decrease in disciplinary issues detracting from teaching and learning.

According to the Little Intermediate's 2014-2015 strategic plan, key strengths included the willingness to innovate by the experienced and highly qualified staff. The staff has further support from the administration and community. The same strategic plan also noted concerns related to limited resources needed for teaching further threatened by the continued reduction in state and federal funding.

### **Initial Understanding**

Currently, the staff of Little Intermediate endeavors to incorporate a strong standards-based curriculum integrating digital tools within lessons. With changes in the community and curriculum, teachers noted the need to adjust their traditional methods of instruction without a set protocol for modeling or teaching students skills for the appropriate use of technology tools, or established protocol for modeling digital citizenship (Staff Survey, February 2015). Without the entire audience of teachers understanding the importance of solving this problem and their roles in developing

digital citizenship skills, the selection and incorporation of instructional technology within the classroom will suffer thereby impacting student achievement.

### **Relevant History of the Problem**

With the state implementation of the teacher evaluation system, the use of technology by the teacher and the student is an evaluation standard of measurement. Administration has noted that the incorporation of technology in lessons is non-negotiable. This situation has been building over the course of the last few years especially when it comes to the respect of teacher time. As documented in the Little Intermediate Master Schedule (2014-2015), the administration has implemented a common grade-level planning every month; however, teachers complain that these planning sessions have become yet another meeting, limiting time and opportunity to collaborate with colleagues in identifying high quality digital resources aligned to lessons. Furthermore, teachers note that students have a wide variety of access to technology at home, yet do not have the skills to know how or when to appropriately use the different technology tools (Staff Survey, February 2015).

### **Stakeholder Groups and Values**

The predominant conflict is with the teachers feeling that their time is not being valued when it comes to planning and implementing technology-rich lessons (Staff Communication, March 2015). Teachers feel that they are being expected to design lessons, yet the students do not have the skills needed to be able to use technology independently while a teacher is busy with another group of students. Administration feels that they are allowing adequate time to find technology resources and design

lessons. Underlying the problem situation, there seems to be an issue of distrust among some teachers with the administration. Specifically the issues relates to maintaining a professional respect for the time needed for preparation for classroom activities with regard to the time spent in meetings.

### **Roles and Personal Histories**

Without the entire audience of teachers understanding the importance of solving this problem and their roles in increasing digital citizenship, the selection and integration of instructional technology within the classroom. The impact could directly affect the evaluation of the teachers based upon the state evaluation system requiring the use of instructional technology by students within the classroom. The school needs to assess the need for a new approach, to engage all teachers in professional development to develop digital citizenship skills of students for effective use instructional technology. My role is to design and implement a professional development plan to improve the understanding and importance of digital citizenship skills.

### **My Background**

Currently, I am a full-time teacher employed by the district. I began my career in 1992 as a high school English teacher. As a National Board Certified Teacher (NBCT) working toward completing my doctorate from Texas A&M in Curriculum and Instruction, I have presented at national, regional and state conferences for National Board from my experiences as a former high school teacher now in the elementary classroom. My educational background is grounded with an undergraduate degree in secondary English education to a master's degree in reading instruction. I then earned a



second master's degree in instructional technology and a specialist degree in curriculum and instruction.

With a career of more than twenty years, I strive to structure lessons for the best outcomes for students and share expertise with colleagues for continued staff development. Furthermore, I believe educators who have the greatest impact upon their students are continuously and actively researching techniques to meet their students' needs.

### **My Field-Based Mentor**

The principal of Little Intermediate is my field-based mentor. For the purpose of the study, she must remain anonymous. In addition to being principal, she is also a lecturer at a large university in the area. She earned her doctorate in Curriculum and Instruction from Nova Southern University. Both as a doctoral student and employee of the district, she has been involved in many research and grant projects for her school to update equipment and help students integrate technology into curriculum effectively. Furthermore, she has authored articles about integrating technology in the classroom.

Prior to her role as principal, she was an assistant principal and Interrelated Special Education teacher within the same district having earned Teacher of the Year. She also has experience working for the Department of Defense overseas prior to completing her Masters Degree in Education.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Theories

This study of teachers' perception of digital citizenship is primarily grounded upon Gardner's Multiple Intelligence theory (Gardner, 2015) relating to classroom technology integration (Gardner, 2000). In a recent presentation at TedxBeaconStreet, Gardner explained his transformation from believing success came from wit and grit (intelligence and effort), to his development of the multiple intelligences theory. He explained the eight types of intelligences: linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic. Through his explanation, Gardner noted that technology falls within the realm of logical-mathematical. Gardner stated, "All human beings have theses intelligences...but no two people have the same combination of intelligences. The fact of our multiple intelligences has powerful implications for education, for work, and for our personal lives and relationships" (Gardner, 2015).

In addition to Gardner, many have scrutinized the meaning of learning and how materials impact how teachers teach and students learn. These great academic minds unite in some aspects, yet are miles apart in other tenets of learning. In *Knowing What Students Know*, Pellegrino, Chudowsky and Glaser (2001) focus upon the act of learning whereas Sarason's *What Do You Mean by Learning?* (2004) explains the process of learning by noting "...one of the features of the classroom context of productive learning

is that the teacher seeks to understand where, so to speak, the learner is psychologically coming from, to exploit that knowledge to help him or her change and *want* to learn more about a particular subject; the teacher knows the starting and the end points, in between is the hard part” (p. 98). The act of defining learning relative to both teachers and students is essential for the effective integration of digital materials in the classroom.

As Sarason referred to Thomas Jefferson’s work with the Constitutional Convention and the “necessity of education as a way of protecting freedom” (p. 189), the same is true when considering the use and application of technological resources as education continues to evolve. For example, the ability of students to be able to use digital materials to the highest level of proficiency is dependent upon being taught, allowing for application and exploration. If a student does not have these skills, the ability to transition from school to work may be impeded, due to the inability to navigate the technological tools in the world of work beyond the classroom walls. Bransford, Brown and Cocking (2000) explains, “learning is a complex cognitive activity of information integration that requires considerable time” (p. 58). Irrespective of this, Dewey (1997) noted, “Neither the ideas, nor the activities, nor the observations, nor the organization are the same for a person six years old as they are for one twelve or eighteen years old, to say nothing of the adult scientist” (p. 88).

From Gardner to Bransford and Sarason to Dewey, each theory adds to the complexity of the roles and responsibilities related to the use of technology by teachers and students in today’s classrooms, leaving educators to ponder what is their role and responsibility within their own classrooms. Undeniably, today’s students are immersed

in technological advances. Still, the current technology that is available to our students falls short of their needs. Due to limited resources, schools often do not have computer access for students, nor are teachers adequately trained to best use this technology.

Darling-Hammond and Cook with Berry and Daughtrey (2012) wrote of the mismatch between what educators receive and what teachers need in professional development, specifically noting that new teachers are better prepared to utilize Common Core Standards with digital technology. Often veteran teachers are in need of adjusting their instructional strategies to best meet the needs of our students. With the immersion in digital resources, it is imperative to redefine our professional development to have the greatest impact upon classroom engagement and student performance.

### **Relevant Literature**

Without understanding the background of the learner, regardless whether the role in the classroom is a teacher or student, it is difficult, if not impossible to fully communicate with each other. Relationships are dependent upon knowing one another, whether the student is a colleague or a child. Vasquez's definition of learning emphasizes the need for quality communication (p. 35). For example, with the availability of instantaneous communication, teachers must know how their students interact and the cultural aspects of the relationships with others. Education professionals also have the ethical responsibility to help their students to identify appropriate and safe means of communication, while also developing meaningful relationships with those physically present in their lives rather than solely relying upon virtual relationships when

faced with a trying situation. As educators, it is also instrumental to understand the significance of our own digital presence.

Teaching students about safe interactions online is supported by the work of Pelligrino et al. The authors refer to the importance of productive use of concepts at developmentally appropriate phases (p. 65). Whereas teachers once taught students about “Stranger Danger” in kindergarten, they now refer to Internet strangers in the intermediate grades with the advent of cyber-relationships. Davis, Christodoulou, Seider and Gardner (2011) noted, “... new digital media and virtual realities offer numerous ways in which learners can master required knowledge and skills” (p. 30). The speed and content of electronic materials available to children directly impacts the role of the schools. Instead of being given district-approved materials, educators identify appropriate and non-appropriate materials as well as teaching the children to recognize reliable sources and content.

Research supports the training of students to use digital resources; however, limited research has been conducted to analyze the teacher’s response to teaching digital citizenship and the need for professional development. This research hopes to analyze teachers’ responses to teaching digital citizenship, including if, and why, digital citizenship should be taught and the potential need for professional development. In order to understand where research currently stands related to this topic, learning theories, frameworks including technology and professional development must be reviewed.

## **Learning Theories**

In 2000, Bransford et al. discussed learning as a complex cognitive activity with a knowledge-centered framework, yet Sarason (2004) defines learning as a process categorized as either productive or unproductive. Vasquez's (2006) definition of learning is also described as a process, but focused upon goal setting and problem solving. The work of Pellegrino, Chudowsky and Glaser (2001) focuses upon active construction of connecting knowledge that has been developed through experience. Each definition contributes to analyzing the purpose and methods to be considered while working with digital materials to enhance a student's education. This is whether the learning is characterized as productive/unproductive, goal setting/problem solving or construction of experiential knowledge.

Bransford refers to motivation as a key aspect of learning. Bransford et al. identified that motivation is influenced by competence, achievement, performance, learning and social opportunities. The schools of the future will need to continue to explain why the skill is needed while giving students the opportunity to develop competence through performance to feel a sense of achievement (p. 61). The reflection that takes place through this process is invaluable in strengthening motivation to continue to participate in the learning process.

Coupled with Gardner's multiple intelligences, an educator may be able to construct a meaning and a method to best fit the students being taught by delving deeper into theories of learning. In *How People Learn* (2000), Bransford et al. establish a framework of learning by breaking the concept down into four subsections: knowledge,

assessment, community and learner-centered. The authors present numerous compelling arguments for their style of learning conceptualization. For example, novice learners need to be told how to do something whereas expert learners may only need assistance in organization. In this context, the traditional role of teacher is adhered to as the “expert” organizing ideas and deciding what is important for the students to learn. Therefore, as the expert incorporating digital tools within a classroom, the teacher must have a wide variety of content knowledge to move away from relying upon teacher’s editions or packaged curriculum to drive instruction. However, Gardener (2000) cautions, “When plugged in, they [technology] are all too often simply used to “deliver” the same “drill-and-kill” content” (p. 33).

### **Learning Frameworks Using Technology**

A framework of learning is supported by the work of Pellegrino et al. in *Knowing What Students’ Know* with the focus upon teaching through teacher modeling. This idea is reiterated through the work of Common Sense Media and is supportive of teaching the modeling method using digital resources in class. For the most productive use of technology, giving students the opportunity to practice follows teacher modeling. Pellegrino et al. noted that most children are able to transfer the knowledge to similar situations using this method.

Education relies upon a foundation of knowledge. Ideally this foundation continues to develop and change throughout life whether through reading, listening, and viewing or personal life experiences. To empower the student to become an expert instills a sense of pride and motivation to entrust the “expert” with the responsibility to

judge the material as valid or suspect. This would hopefully encourage the student expert to develop a stronger understanding of the material, thereby enabling the student to become the teacher. By empowering a student to teach others about a digital tool or material, that student becomes the classroom expert showcasing the ability to embed the tools into a variety of situations throughout the school year.

Likewise, Sarason envisions learning as a living process especially when using digital resources. He refers to learning as being a productive or non-productive work. Learning without meaning is simply clutter. Students can read words but if the words have no meaning then there is no learning. The same is true with digital materials. If not taught, the student will neither utilize the digital resource in an effective manner nor continue to use a tool viewed as archaic or non-essential. Just think how a student would react if asked to present a final paper on a manual typewriter!

Additionally, the work of Kereluik, Mishra, Fahnoe and Terry (2013) offers a critical review of 21<sup>st</sup> century knowledge frameworks for teachers and teacher educators noting the need for change since students are “fundamentally different from students in the past – and thus by implication have different learning goals and necessitate different teaching approaches” (p.127). Kereluik et al. continues by citing the 21<sup>st</sup> Century Schools Website defining the significant changes in the student’s life and the technological tools readily available to them from Smartphones to gaming devices with connections to individuals throughout the world. The article continues by noting the recommendations for 21<sup>st</sup> century knowledge came from the likes of Howard Gardner, Daniel Pink and organizations such as the Partnership for 21<sup>st</sup> Century Schools.



Although these are suggestions, the authors reiterate “given the rapid pace of technological change, it seems shortsighted to base education of the entire 21<sup>st</sup> century on the tools available today!” (p. 128).

### **Role of Technology in Education**

Given the growing dependence upon technology in our society, classroom knowledge is constructed through the use of various digital tools. Unfortunately, often younger students are able to repeat the process but do not understand why or how to select a particular tool when given a choice. For example, within a school system students are often required to use “safe search” methods by using only the school system’s specified search engines when accessing the Internet. With these mandates, students have limited experience navigating multiple search engines, consequently impacting the ability to identify legitimate and reliable sources without explicit teacher modeling. With teacher modeling, access and experience, students with access to digital materials at home are quickly able to grasp the concept quicker, with additional practice, which supports Vasquez’s (2006) definition of learning relying upon digital tools such as the Internet.

Learning often begins as a mystery but as time progresses and the pieces of the puzzle begin to fit, the learning takes shape. As Schiro (2013) explains, “Learner Centered educators see the world through the eyes of the learners, who are their central concern” (p. 114). The experiences of the students are designed by the teacher with the activities and engagement of the students as the core of the learning experience.

In *Experience & Education*, Dewey (1997) wrote, “I have taken for granted the soundness of the principle that education in order to accomplish its ends for the individual learner and for society must be based upon experience” (p. 89) vocalizing his belief in the learner as an active member in the classroom. This type of learning, sometimes referred to as student centered learning, is the one-on-one instruction that often takes place in our homes as a child shows an interest in any type of activity, book, story, or film. By focusing upon the child’s interest, the motivation is inherently laying the foundation for knowledge to grow with follow-up activities to help develop the child’s passion for learning.

However, as Neumann (2013) explains, “ ‘student-centered learning’ is actually a complicated and messy idea that has encompassed a wide range of sometimes fundamentally different meanings, each holding important implications for education (p. 172). Just as raising a child differs from home to home, Learner Centered in one classroom can look and feel very different from the classroom next door. Each classroom environment is designed based upon the students’ needs, interests and abilities.

As authors An and Reigeluth (2012) state, “The learner-centered model focuses on developing real-life skills, such as collaboration, higher-order thinking, and problem-solving skills, and better meets the complex needs of the information age” (p. 54). By using digital resources in real-life skills, the teacher is able to help the student to connect the activity learned in the classroom to what is seen outside to problem-solve and become more a refined member of society.

In light of high stakes testing as a method of accountability, it is important to note the role of assessment in a learner-centered classroom has a different function. In the Learner Centered classrooms, authors An and Reigeluth clarify, “They [teachers] conduct assessments not just to generate grades but to promote learning” (p. 55). Assessment is a means of providing feedback to students and to encourage students to reflect upon their own learning. Students are expected to be active evaluators of their own work and the work of their peers. Teachers utilize assessment in Learner-Centered classrooms as “They [teachers] monitor individual students’ progress continually to provide feedback on their growth and progress” (An & Reigeluth, 2012, p. 55). By allowing students the time to digest and refine their skills, students do show marked increase in understanding appropriate use of technology.

### **Need for Professional Development**

The development of knowledge for a student is consistent with the development of knowledge for a teacher. If a teacher lacks the professional development needed to implement the use of the digital resource while teaching, the impact upon a student’s learning will not be as profound. It is important to note in the words of authors An & Reigeluth, “Even if teachers have all the knowledge, skills, attitudes, and tools they need, they will not be able to create effective learner-centered classrooms if they still have to cover a large amount of content in a short time and focus on preparing students for high-stakes tests” (p.61). Whether defining, using or assessing in a Learner-Centered classroom, Neumann (2013) notes, “When we [educators} call contexts that center *on* students “student-centered,” we ascribe less value to the role of students in determining

what it is they should learn in schools than we do if we reserve the label “student-centered” for contexts that center *with* students” (p. 172). Therefore, the integration of technology in the classroom accommodates the need for instantaneous feedback using a variety of digital tools and teacher driven differentiation using a variety digital resources dependent upon the needs of students.

To build upon the successful classroom practices of veteran teachers, pedagogy can be restructured to meet the needs of students preparing for college and career. The redevelopment of the learning community for the educator is time intensive, with clear implications for in-depth need for restructuring to meet the needs established for students to be prepared for their futures. Marrongelle, Sztajn and Smith (2013) note: “The process of starting from common, research-supported characteristics of high-quality, high-impact professional development and convening a diverse group of experts to weigh in on the necessary elements of scaling up professional development in support of common state standards is a process that can be replicated in other disciplines” (p. 209). Darling-Hammond et al (2009) noted that teacher quality has the potential to close the gap. Darling-Hammond stated that those highly qualified teachers with traditional licensure who have taught more than two years can help students narrow the gap with their on-grade level peers. Teacher quality can be influenced by the quality of student teaching experience and extensive coursework tying theory to practice. Teacher quality coupled with the opportunity to embed technology within the classroom allows for students to continue working independently at their independent level without direct teacher interaction.

Research calls for an overhaul of the current state of professional development in the United States. In order for our children to compete globally, we need to invest in our educational system with equal access to resources to all students. Highly qualified educators need to be fostered and supported with intensive professional development with focus upon a higher-order thinking curriculum beginning with early learning programs and continuing throughout a child's educational career according to Darling-Hammond. Teachers need to understand the significance of the digital tools upon the students in our schools, as discussed by Craft (2012). Craft states that childhood is "at risk" (p. 178) with the availability and access to digital tools noting numerous potential opportunities for children to connect with dangerous individuals or inappropriate content. However, the children need to be empowered to explore creative contributors to society in partnership with peers, while being protected and taught by teachers and parents. Fonseca and Bujanda (2011) reinforced this notion by stating, "the main purpose of integrating digital technologies into citizenship education programs is to offer students opportunities to broaden and enrich children's identities and actions as citizens" (p. 249).

To date, most research has been conducted upon what students need, yet few studies have been completed related to the perception of technology professional development for teachers in the use of technology in the classroom. In 2008, Mueller, Willoughby, Ross and Spect studied teachers' perspectives of integrating computers in the classroom finding "attitudes towards computer technology also proved to be a

critical contributor that distinguished successful and less successful integrators at both [elementary and secondary] teaching levels” (p. 1533).

Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, E. and Sendurur, P. (2012) completed a study about alignment of pedagogical beliefs after the external technology barriers including access and support were eliminated. The study focused upon twelve award-winning classroom teachers recognized for their technology practices including Crosby who recorded a Ted Talk (2010) about his use of technology in the classroom. These teachers were questioned about their practices and beliefs resulting in the identification of the correlation of beliefs to practice. For example, the authors noted, “technology was a tool that allowed them [teachers] to experiment, implement, and refine these new approaches to teaching and learning” (Ertmer et al., p. 431). The study resulted in the recommendation of focusing effort upon changing teachers’ attitudes and beliefs related to technology integration.

Miranda and Russell (2012) focused upon elementary classrooms in their study of the use, support and effect of the use of technology. This study found that a teacher’s experience with technology and belief in the benefits of using technology are strong indicators of teacher-directed student use of technology. The authors noted the implication for practice needs to concentrate upon “closer attention is needed to change teachers’ beliefs and values about technology” (p. 653).

In their study, Unger and Tracey (2013) found “a beneficial factor to consider when designing technology learning environments is to include content, processes, and contextual factors that are relevant to the teachers” (p. 141). This study focused upon

the access to technology and the practice of teaching realizing that often teachers do not have the opportunity to perfect technology skills or implement use of skills with limited access in the classroom.

Barriers were also addressed in the technology integration study of Kim, Kim, Lee, Spector and DeMeester (2013). With previous research, the authors found “it was worth investigating second-order barriers, especially teacher beliefs, not only because of environmental readiness, but also because of teachers’ technology skills and knowledge that were used in technology integration combined with their existing knowledge of content and pedagogy” (p. 78). At the American Educational Research Association Annual Conference (2014), Trainin and Friedrich stated, “Elementary teachers in the 21st century need to have a deep understanding of new technologies and how they can be integrated into learning, however, the fast pace of technological innovation and social change makes it hard for educators to stay abreast of new developments and to integrate them into effective classroom instruction” (p. 2). Whereas Trainin and Friedrich focused upon elementary teachers, the study of Davidson, Richardson and Jones (2014) is exploration of the use of technology of high school ELA teachers. Davidson et al. concluded “The opportunity to participate in collaborative technology training with peers might be beneficial for participants from this case study” (Conclusions section, para. 2).

## Most Significant Research and Practice

Table 1

### *Most Significant Research and Practice Studies*

An, Y.J. & Reigeluth, C. (2012). Creating technology-enhanced, learner-centered classrooms: K-12 teachers' beliefs, perceptions, barriers, and support needs. <i>Journal of Digital Learning in Teacher Education</i> , 28(2), 54-62. Retrieved from <a href="http://www.eric.ed.gov/PDFS/EJ960151.pdf">http://www.eric.ed.gov/PDFS/EJ960151.pdf</a>
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Table 1 (*Continued*)

Fonseca, C., & Bujanda, M. E. (2011). Promoting Children's Capacities for Active and Deliberative Citizenship with Digital Technologies: The CADE Project in Costa Rica. <i>Annals of The American Academy of Political and Social Science</i> . doi:10.1177/0002716210383657
Gardner, H. (2015, November). <i>Beyond Wit and Grit: Rethinking the Keys to Success: Howard Gardner TEDxBeaconStreet</i> [Video file]. Retrieved from <a href="https://www.youtube.com/watch?v=IfzrN2yMBaQ&amp;feature=player_embedded">https://www.youtube.com/watch?v=IfzrN2yMBaQ&amp;feature=player_embedded</a>
Gardner, H. (2000). Can technology exploit our many ways of knowing. <i>The digital classroom: How technology is changing the way we teach and learn</i> , 32-35.
Howard Gardner   Hobbs Professor of Cognition and Education / Harvard Graduate School of Education. (2015). Retrieved from <a href="http://howardgardner.com">http://howardgardner.com</a>
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Table 1 (*Continued*)

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### Significance of the Literature Review

Learning is truly a work of art in every person's life and ideally a never-ending process. This distinction between novice and expert learners is important when considering how, when and why digital materials are utilized in teaching and learning. Early phases of this Record of Study indicate teachers vary in their understanding of digital citizenship skills and the impact upon student achievement. Some do not believe that it is the responsibility or place of the teacher to teach digital citizenship skills. Others question the importance of digital citizenship skills within the intermediate classroom. Still others advocate for the changes in curriculum to incorporate digital

citizenship skills within classroom instruction using technology. The perceptions of these groups differ greatly; however, all noted that to teacher's time is essential to prepare high quality instruction using technology resources.

The literature review provided information to frame the problem by addressing key points related to teaching digital citizenship. The first step was to define the rationale for using digital tools in the classroom. Since technology has become an intricate part of our society, the next step was to ascertain teachers' perspectives relative to if and why digital citizenship skills should be taught. This lead to the issue of the need for professional development focused upon teaching digital citizenship skills.

## CHAPTER III

### FRAMING THE PROBLEM

#### **The Problem Situation**

##### **Learning More**

During the second internship, information collected through interviews, observation, and informal conversations illustrates the emergence of professional values of the teachers conflicting with organizational values of the school and district. The school district has a strict set of policies in place for effectiveness and efficiency. The district policies are specifically aligned to protect students online. Although educators understand the need for such policies, the professional values of power/control and autonomy challenge the professional value of obligation to the organization. In ranking these values in Table 2, the issue of autonomy underlies all others with educators expressing the perception of limited influence upon district policies relating to the use of technology in the classroom.

Table 2

*Rank-Order Table of Category and Values, Conversants and Illustrative Statements*

<b>Rank</b>	<b>Category and Value</b>	<b>Conversant</b>	<b>Illustrative Statements</b>
1	Professional Values: Obligation to Organization	P3	“Expectations of including technology is very high in our new evaluation system; however, time is minimal.”
		P1	“Constant need to incorporate technology in lessons yet there is not enough time to identify needs of students.”
		P5	“Taking the time to select technology resources for the greatest impact upon student learning.”
2	Organizational Value: Efficiency	P4	“Internet connectivity down. Technology being updated and unavailable for student use. Not having enough machines/devices for individual students to participate in technology rich lessons.”
		P1	“The components, such as headphones and microphones (specific to my reading program) that do not hold up with the amount of use that we utilize within the classroom setting.”
		P3	“Not enough [technology resource access]. Not enough internet support.”
3	Professional Values: Power & Control	P2	“When it does not work as planned, one problem I have experienced is inability to show you tube videos.”
		P3	“I can be trusted to engage intermediate students in meaningful technology.”
		P5	“I want to empower students to use technology in meaningful ways beyond test prep”

Table 2 (*Continued*)

Rank	Category and Value	Conversant	Illustrative Statements
4	Professional Values: Autonomy	P4	"I want to effectively utilize technology in the classroom while maximizing instructional time. I find that when I do embedded technology into lessons, most of the lesson is spent teaching students how to use the technology."
		P5	"I want to do anything and everything that makes my classroom more efficient or interesting."
		P1	"I would love to connect my students to others globally."

Notes: Conversant: all certified faculty members of the school

Participant 1 (P1), Special Education Teacher

Participant 2 (P2), School Counselor

Participant 3 (P3), 5<sup>th</sup> grade Teacher

Participant 4 (P4), Advanced Learning Program Teacher

Participant 5 (P5), 5<sup>th</sup> grade teacher

As documented in the Table 2, teachers express that they are finding themselves expected to do more with less time for planning. The time constraints are further complicated with limited resources allowed by district filters on technology designed to keep the children safe. One teacher noted, "I do the majority of my planning at home often to find that my technology links are not accessible at school." After spending hours at home planning, teachers finding selected online technology blocked by the district filters is fueling the sense of frustration and lack of power in individual lesson creation

and implementation. To address this issue, teachers are attempting to work together to pass on helpful sites or resources to colleagues; however, resources are selected with limited or no training. A further complication is the expectation that digital citizenship training for students is dependent upon instruction by individual teachers without a set standard or expectation.

With the statewide assessment, participants convey concern with the issues of obligation to the organization and power/control. Issues specifically raised included following district protocol relating to the use of technology such as only using approved sites and not being able to access files from outside sources such as Drop Box or flash drives. Individuals referred to the recent county technology policy holding an educator financially responsible if the educator is found responsible for infecting district technology with a virus or worm using an unapproved device or program including personal email or storage devices. One participant, expressing trepidation in using district technology, wondered how a teacher is expected to teach students to use technology in such a situation (personal communication, November 8, 2015).

In turn, organizational values fixated upon efficiency specifically related to the physical components of technology access and the impact upon effectiveness. The primary concern for the organization is that the technology is usable and a particular protocol is being followed for repair. For example, the district mandates technology requests for any installation of software or technology needs must be processed through the district technology center and a help ticket must be completed prior to any work being completed on any district owned technology. This creates an issue with personnel

since the school technology contact only is in the building every week to ten days. This creates what some deem an unreasonable wait times for technology repair or access with numerous participants noting that a staff member in the building could easily complete simple repairs or software installation.

Overall, the professional values including obligation to the organization, autonomy, power and control outnumber organizational value of efficiency. Although participants view themselves as a part of a whole school district, the issues relating to training and professionalism are highlighted in this phase of research. Furthermore, the underlying human value of freedom specifically related to professional ability and individual choice of use of time was not yet directly addressed.

### **Problem or Dilemma**

Cuban defines dilemmas as “messy, complicated, and conflicted-filled situations that require undesirable choices between competing, highly prized values that cannot be simultaneously or fully satisfied” (Cuban, 2001, p. 10). Given that teachers are feeling that they are being forced to incorporate technology into lessons without adequate time or professional development, this can be categorized as a dilemma. Teachers feel that there is an implicit expectation that technology is to be used as a method of differentiation. Not all teachers are familiar with the terminology of digital citizenship; however, each expressed the need for students to be trained with the expectations of how technology needs to be used at school and at home. Since teachers are feeling conflict with the desire to model digital citizenship for student progress and the time constraints required to effectively utilize technology in the classroom, this situation is a problem.



## **My Journey into the Problem Space**

### **Considering Alternative Viewpoints**

In framing the problem originally, I used the psychological point of view by addressing the perception of digital citizenship held by teachers. Cuban (2001) noted the psychological view holds the premise of “individuals’ values, attitudes, traits, and background cause problems (p. 27). When looking at the problem through the teachers’ eyes, I considered the issues of time, curriculum and tradition many referred to when discussing digital citizenship and the use of technology. Teachers referred to the lack of time to meet the current curriculum constraints or the success of prior students who were not taught about digital citizenship. More than once, teachers refuted the desire to change or add anything to the curriculum as an attack on their professional abilities.

To reframe, I considered organizational points of view since so many stakeholders mentioned the issue of time needed to address administrative requirements. The premise of the organizational view is the situation of lack of adequate time to research, select and implement the use of technology resources in daily lessons. Teachers express that time is not valued when it comes to lesson planning and administration feels that many give too many excuses.

### **The Evolution of my Current Understanding**

Over the course of the last few years there has been a greater push to differentiate student learning through the use of technology in the classroom. Planning technology-rich differentiated lessons has been a source of contention with the staff as the resources

are dated and limited. Furthermore, time is a commodity that is taken by many meetings throughout the course of any workweek.

In all of the conversations, teachers shared that they feel that the expectations for lesson planning and implementation has an added component but time is being taken by a multitude of lengthy meetings. Frustration is evident on the teachers' part with thirty minutes of daily planning eaten up by what is perceived to be excessive numbers of emails requiring response within twenty-four hours, team meetings at least twice weekly, and weekly faculty meetings lasting a minimum of two hours each Wednesday.

The administration has compromised with a monthly extended planning for every teacher; however, teachers complain that these planning meetings have become yet another meeting instead of time to meet and plan with curriculum partners.

Administration feels that the time allotted is plenty of time to plan accordingly. Given that both teachers and administration feel passionately about the issue, the tension seems to be building, taking away from the issue of increasing the use of high quality technology resources in lessons.

## CHAPTER IV

### PROBLEM STATEMENT

#### **Audience**

This Record of Study is directed to the teachers at Little Intermediate School within a suburban town outside of a major metro area in the Southeastern United States. Little Intermediate serves approximately 750 students in grades 3-5 with 54 certified teachers, seven paraprofessionals, two administrators and four support staff members. The faculty strives to aspire to the highest level of excellence for the students, staff and community. The staff of the school works to incorporate a strong standards-based curriculum integrating digital tools within lessons. Outcomes will be dependent upon staff buy-in unless the school administration mandates digital citizenship lessons.

#### **Ideal Scenario/Vision**

To assure that students acquire digital citizenship skills for appropriate use of technology, the school must provide high-quality professional development related to digital citizenship skills. Ideal participation will include teachers, paraprofessionals and administrations for an effective professional development plan. The professional development plan will track changes in perception related to digital citizenship, assist in developing skills for teachers to effectively select and support the utilization of instructional technology. However, currently there is no formal plan for teaching or modeling expected digital citizenship skills for our students.

### **The Real**

Within the classrooms of the intermediate campus, there are teachers who vary in their understanding of digital citizenship skills and the impact upon student achievement. Some do not believe that it is the responsibility or place of the teacher to teach digital citizenship skills. Others question the importance of digital citizenship skills within the intermediate classroom. Still others advocate for the changes in curriculum to incorporate digital citizenship skills within classroom instruction using technology. The perceptions of these groups differ greatly.

### **Consequences for the Audience**

Without a large audience of teachers understanding the importance of solving this problem and the teacher's role in increasing digital citizenship, the selection and incorporation of instructional technology within the classroom will continue to be limited. The impact could directly effect the evaluation of the teachers based upon the state evaluation system requiring the use of instructional technology by students within the classroom. In turn, this could negatively impact student's ability to effectively use technology in the future. School leaders need to assess the need for a new approach to engage all teachers in professional development to develop digital citizenship skills of students for effective use instructional technology.

### **My Role**

My role is to design and implement a professional development plan to improve the understanding and importance of digital citizenship skills. I created a survey to establish a baseline of digital citizenship understanding. I planned focus group meetings

relating to digital citizenship skills including technology help sessions/professional development. Finally, I gathered data by giving the initial survey again to analyze any changes in understanding or indication of further need for professional development.

## CHAPTER V

### THE SOLUTION

#### **Possible Solutions**

##### **Solution 1**

#### **The Problem**

Within the school, the understanding of digital citizenship varies greatly among staff members. Some do not believe that it is the responsibility or place of the staff member to teach digital citizenship skills. Faculty questions the importance of digital citizenship skills within the intermediate classroom. However faculty continue to advocate for changes in the curriculum to incorporate digital citizenship skills within classroom instruction using technology. The perceptions of these groups differ greatly resulting in a conflicted response and an impartial buy-in to professional development.

#### **The Solution**

A series of professional development sessions for all staff members at the school will be conducted to establish a set protocol for modeling and teaching digital citizenship skills. First, all staff members are given a survey to complete, assessing their knowledge and perception of digital citizenship skills. Mini-professional development seminars ranging from 5 to 10 minutes are conducted during monthly faculty meetings focusing upon how to address the needs of students within the school using materials from Common Sense Media. These sessions will be extended through a secure staff message board to share concerns, feedback or other points of information.

## **Solution 2**

### **The Problem**

Within the school, the understanding of digital citizenship varies greatly. Some school personnel do not believe that it is the responsibility or place of teachers to teach digital citizenship skills. Others question the importance of digital citizenship skills within the intermediate classroom. Still other teachers advocate for the changes in curriculum to incorporate digital citizenship skills within classroom instruction using technology. The perceptions of teachers differ greatly resulting in a conflicted response to professional development.

### **The Solution**

Professional development sessions for homeroom teachers at the school will be conducted to establish a set protocol for modeling and teaching digital citizenship skills. First, all teachers are given a survey to complete, assessing their knowledge and perception of digital citizenship skills. During weekly team meetings, 5-10 minute mini-professional development sessions are conducted to focus teachers upon needs of their students and how to address within the classroom with topics being focused upon particular teachers. Utilizing materials from Common Sense Media, eight professional development topics will include: (1) internet safety, (2) privacy and security, (3) relationships and communication, (4) cyber bullying, (5) digital footprint and reputation, (6) self-image and identity, (7) information literacy and (8) creative credit and copyright. Classroom teachers would be trained in all eight areas. However, specialists would be trained in particular lessons for added support. The technology teacher would be trained

in: (1) internet safety, (2) privacy and security, The counselors would be trained in: (3) relationships and communication, (4) cyber bullying, (5) digital footprint and reputation, and (6) self-image and identity. The librarian would be trained in: (7) information literacy and (8) creative credit and copyright. Follow-up will be through a focus group to share concerns, feedback or other points of information.

### **Favorable Outcomes**

Desired outcomes for this solution will consist of a united and concise statement regarding the importance of digital citizenship skills for students. This will open the conversation among staff members of how digital citizenship skills are taught and modeled. Furthermore, this will engage staff members to share potential issues that need to be addressed to fully incorporate technology tools within the classroom. The focus will be on using technology tools in the safest way possible while teaching students how to protect themselves outside of the school building.

### **Data Collection to Support a Favorable/Not so Favorable Outcome**

Data collection will consist of anecdotal notes from informal interviews and coded survey responses to closed and open-ended questions. In addition, quantitative data will be collected in the identification of technology use as indicated in lesson plans. Data collection will be used to gauge the perspectives of staff members within the building to ascertain the need for digital citizenship training initially then track changes in the faculty perspectives after training utilizing the same survey questions.



### **Input from Others**

I spoke with four stakeholders: the principal, a school counselor, and two teachers. I met with four certified staff members from the school to discuss their thoughts regarding digital citizenship and the use of technology in the classroom. Each shared their personal experience and understanding of digital citizenship and the need for staff development. I was surprised by how much these individuals focused upon the lack of technology tools in the classroom instead of how they could better use what they do have instead.

#### **Stakeholders' Input**

Over the course of the last few years there has been a greater push to differentiate student learning through the use of technology in the classroom. Planning technology-rich differentiated lessons has been a source of contention with the staff as the resources are dated and limited. Furthermore, multiple meetings throughout any week take invaluable time. Frustrations were evident in the conversations with stakeholders. They shared that the expectations for lesson planning and implementation of lessons using technology requires additional time commitment; however, time is being depleted by a multitude of lengthy staff meetings. The administration has compromised with a monthly extended planning for every teacher; however, teachers complain that these planning meetings have become yet another meeting instead of time to meet and plan with curriculum partners. Due to time being an issue, all stakeholders supported the second solution. The teachers specifically endorsed the second solution noting the preference for collaborative discussion while working with their own teams.

### **Classmates' Input**

Since the teacher stakeholders voiced concern about putting thoughts into writing, I addressed this issue with three of my classmates. My first classmate noted helping principals to see where needs lie in the classroom is sometimes difficult, as witnessed in her role as a curriculum coordinator. She stated that teachers are slowly seeing that with support and communication, teaching practices need to be altered to impact student success. However, fear often prevents them from changing the way they have always done things. When their principals are not sharing the same message as the curriculum department, reform is extremely difficult. Another classmate suggested conducting the research by creating a professional learning community while maintaining confidentiality with my participants. He shared that professional learning communities are most effective when there is genuine trust among the participants. My third classmate provided multiple insights of how the professional learning communities are organized and grow over time. She also shared that confidentiality is key when establishing a new learning community especially since there is a sense of conflict between teachers and administration. The issues of confidentiality and trust helped me to reformulate how to address the participants in my final solution.

### **Field Advisor's Input**

In discussing the results with my field supervisor, I found that she was wary of the stakeholder's responses regarding lack of time and training. She felt that some teachers were simply making excuses. We discussed the problem statement created and the ideas for a solution considering input from the stakeholders. She helped me to

articulate the perception of others in a non-threatening manner by noting that some do not feel that the issue of digital citizenship is a teacher's responsibility. She shared that the use of technology is essential in education and feels it is a disservice if teachers do not incorporate educational technology resources into a child's daily life. In addition, she noted how some students are unaware of the appropriate use and how some teachers genuinely do not know how to incorporate technology effectively requiring an adjustment of teaching practices to meet the needs to students.

### **Others' Input**

I received a variety of input through meetings with my thematic chairs that took place over the course of a few months by email, Skype and Google hangout. Dr. Viruru and Dr. Rackley helped me to clarify my goals, objectives, activities, measures and methods. This specifically was done in great detail as I moved through the IRB continuing review process. We have discussed the logistics of my Problem of Practice by focusing upon digital citizenship. Dr. Viruru and Dr. Rackley helped me to focus upon the perception of the teachers as a means to identify the teacher's definition and method of teaching. They also suggested resources and methods for the study.

## **The Proposed Solution**

### **Informing the Solution**

Teachers would feel more valued if teachers were given the adequate time, training and opportunity to select technology tools in the classroom and train students on the appropriate use. Within the classrooms the school campus, teachers vary in their understanding of digital citizenship skills and the impact upon student

achievement. Some do not believe that it is the responsibility or place of the teacher to teach digital citizenship skills. Others question the importance of digital citizenship skills within the intermediate classroom. Still others advocate for the changes in curriculum to incorporate digital citizenship skills within classroom instruction using technology. The perceptions of these groups differ greatly; however, all noted that time is essential for teachers to prepare high quality instruction using technology resources.

### **The Final Solution**

#### **The Problem**

Within the school, the understanding of digital citizenship varies greatly. Some do not believe that it is the responsibility or place of teachers to teach digital citizenship skills. Others question the importance of digital citizenship skills within the intermediate classroom. Still other teachers advocate for the changes in curriculum to incorporate digital citizenship skills within classroom instruction using technology. The perceptions of teachers differ greatly resulting in a conflicted response to professional development.

#### **The Solution**

I will create a survey to establish a baseline of digital citizenship understanding. The survey will consist of questions using a Likert scale and open-ended responses based upon the concerns brought up during initial discussions with stakeholders. Lesson plans will be reviewed to identify uses of technology in the classroom. I will plan focus group meetings relating to digital citizenship skills including technology help sessions and professional development. Finally, I will gather data by giving the initial survey again to analyze any changes in understanding or indication of further need for

professional development. Data will be shared with the school administration to plan next step.

### **Favorable Outcomes**

By identifying the initial perception followed by training then post survey, I will be able to track the potential changes in perceptions regarding the importance of teaching digital citizenship skills. This will assist in developing skills for teachers to effectively select and use instructional technology. Initially, results of this study will be used to guide classroom planning. This information will also be shared with the school leadership team and district for future planning of professional development. In addition, publication of the results will add to the limited research in this area.

### **Data Collection to Support a Favorable/Not so Favorable Outcome**

Data collection will focus upon teacher understanding of the term digital citizenship and the perceived importance of teaching skills in the classroom. Data collected will be used to build the course of action working toward a solution.

## CHAPTER VI

### METHODS

#### **Statement Regarding Human Subjects and the Institutional Review Board**

The IRB Proposal process to secure compliance with federal guidelines for collecting data from human subjects was completed during the fall semester of 2014. After expedited review, it was approved in January 2015. See Appendix A for IRB approval documentation. In December 2015, I completed an application for continuing review and an IRB amendment to the proposal to include a focus group to further study digital citizenship and technology integration.

#### **Goals, Objectives, and Activities**

The purpose of my study is to identify if certified staff members are teaching digital citizenship skills and if staff members perceive a need to teach digital citizenship skills. Currently, I believe that there is a need for professional development on the topic of digital citizenship. By identifying the initial perception followed by training, and a post survey, I will be able to track the potential changes in perceptions. Furthermore, this will assist in developing skills for teachers to effectively select and use instructional technology within the classroom setting through professional development opportunities.

This study will focus upon identifying the perceptions of certified staff regarding how teachers teach digital citizenship while incorporating technology in the classroom. The goal of this study is to offer professional development related to digital citizenship

skills enabling teachers to more effectively select and utilize technology within the classroom.

*Table 3*  
*Goals, Objectives, and Activities Associated with the Problem Solution*

Goal	Objective	Activity
I. Teachers will explore personal perceptions of digital citizenship issues.	A. Analyze teacher responses to understanding of digital citizenship, rationale for teaching and technology use in the classroom.	1. An online survey will be available to participants to record teacher's definition of digital citizenship and response to teaching.  2. Analysis of technology use in the classroom as indicated in teacher's lesson plans.
II. Teachers will contemplate methods of how digital citizenship could be taught.	A. Optional participation in professional development.	1. Teachers will work together to select and use technology tools in the classroom to enhance digital citizenship. Possibility of continuing with professional development sessions as indicated by teacher interest.
III. Teachers will establish a learning community for needed professional development.	A. Teachers will reevaluate understanding of digital citizenship and need to teach digital citizenship skills.	1. Follow-up online survey will be available to participants to record teacher's definition of digital citizenship and response to teaching.  2. Secondary analysis of technology use in the classroom as indicated in teacher's lesson plans after participation in professional development.

## **Guiding Questions, Information Collection Methods and Rationale for Methods**

### **Guiding Questions**

The guiding questions focused on understanding and perception of digital citizenship skills. Initially, the questions were used to open communication and analyze current understanding of the term digital citizenship. Upon building a community to explore the perceptions, a group works together to explore how digital citizenship could be taught in the classroom while working to help others in developing skills and lessons. To do this, the following questions were explored:

1. As a teacher, are you familiar with the concept of digital citizenship?
2. Do you teach digital citizenship? If so, how?
3. How can teachers help other teachers with digital citizenship skills and lessons?

### **Collecting Data**

Data collection consisted of anecdotal notes, frequency charts and survey results. Goals, objectives and activities are identified in Table 3.

### **Summary**

Objectives are specific, measurable and time-bound. Guiding questions, methods of data collection and rationale for methods used are listed in Table 4.



Table 4

*Goals, Objectives, Activities, Guiding Questions, and Assessments Associated with the Problem Solution*

Goal	Objective	Activity
I. Identify teacher perceptions of digital citizenship issues.	<p>A. Analyze teacher responses to understanding of digital citizenship, rationale for teaching and technology use in the classroom.</p> <p><i>Guiding Questions:</i></p> <p>(a) <i>As a teacher, are you familiar with the concept of digital citizenship?</i></p> <p>(b) <i>Do you teach digital citizenship? If so, how?</i></p>	<p>1. An online survey will be available to participants to record teacher's definition of digital citizenship and response to teaching.</p> <p>2. Analysis of technology use in the classroom as indicated in teacher's lesson plans.</p> <p><i>Before and after the professional development, teachers will complete a survey about of digital citizenship. Technology use in the classroom will be analyzed by quantity, type and purpose using lesson plans.</i></p>
II. Teachers will contemplate methods of how digital citizenship could be taught.	<p>A. Participating teachers will report changes in understanding of digital citizenship by the end of the professional development sessions. <i>I will know if this objective has been met by observing participation in professional development sessions and use of technology as indicated in lesson plans.</i></p> <p><i>Guiding Questions: How can teachers help other teachers with digital citizenship skills and lessons?</i></p>	<p>1. Teachers will work together to select and use technology tools in the classroom to enhance digital citizenship. Possibility of continuing with professional development sessions as indicated by teacher interest. <i>I will collect data from attendance, agenda and discussion notes.</i></p>

Table 4 (*Continued*)

<p>III. Teachers will establish a learning community for needed professional development.</p>	<p>A. Teachers will reevaluate understanding of digital citizenship and need to teach digital citizenship skills. <i>I will know if this objective has been met by identifying changes in coded survey responses.</i></p> <p><i>Guiding Questions:</i></p> <p><i>(a) What has influenced your use of technology in the classroom?</i></p> <p><i>(b) What role does technology play in the curriculum?</i></p>	<p>1. Follow-up online survey will be available to participants to record teacher's definition of digital citizenship and response to teaching. <i>I reassess will use the pre-survey.</i></p> <p>2. Secondary analysis of technology use in the classroom as indicated in teacher's lesson plans after participation in professional development. <i>I will reassess lesson plans for technology use in the classroom will be analyzed by quantity, type and purpose.</i></p>
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Table 5

*Guiding Questions, Data Collection Methods and Rationale for Methods Leading to Conclusions about the Success of the Problem Solution with the Goal of Identifying Teacher Perception of Teaching Digital Citizenship.*

Guiding Questions	Data Collection Methods	Rationale for Methods
1. Are teachers familiar with the concept of digital citizenship?	In the spring of 2015, present a confidential survey including open ended and scaled responses. Analysis of responses will be used to identify understanding of digital citizenship and individual perspectives in regard to teaching digital citizenship skills in the classroom. [See Appendix B]	Availability of online survey for all potential participants. Survey will be coded and confidential to allow for participants to fully share understanding and perspective related to teaching digital citizenship skills.
2. Are digital citizenship skills being taught in the classroom?	Further analyze survey responses along with technology use in the classroom as indicated in lesson plans.	Secondary analysis of the perception of the importance of digital citizenship combined with a comparison of coded survey results and technology use.
3. How can teachers help other teachers with digital citizenship skills and lessons?	Document meeting agendas, attendance and notes implementation of the orientation. Transcribe all informal interviews in which teachers ask questions and express concerns about digital citizenship.	Collaborative professional development sessions driven by the needs, concerns and interests of participants.

Table 5 (*Continued*)

4. What influences use of technology in the classroom of teachers continuing with professional development?	Collect responses using focus group questions to guide discussion. [See Appendix C]	Allowing time for teachers to self-reflect upon discuss perceptions to provide them with an opportunity to continue self-directed professional development with the support of colleagues.
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### **Instruments and Analysis**

#### **Protocols and Instruments**

Data instruments were designed to identify staff perception of digital citizenship, document dialogue related to technology training and identify skills required to select and use technology in the classroom. Data was collected using lesson plan observations, participant survey responses, informal interviews and focus group participation.

After meeting with my field advisor and discussing my observations with my advisors, I collected data using field notes during informal interviews. Initial conversations were with four certified staff members from the school to discuss their thoughts regarding digital citizenship and the use of technology in the classroom. Each shared their own experience and understanding of digital citizenship and the need for staff development. After sharing information with my field advisor, she helped me to devise a plan to identify teacher's perceptions of teaching digital citizenship and address the stakeholder's needs by offering professional development sessions.

The online survey was designed with the assistance of my advisors and approved by my field advisor prior to use. A survey link was available for a limited time to participants before and then after the professional development sessions. Information was collected from closed-ended and open-ended survey statements. The same survey was used each time.

During voluntary professional development sessions, I kept anecdotal notes. These notes along with the agenda allowed me to track participation and suggested areas of need. I added addendums to the notes to include informal conversations between sessions.

Finally, I used a series of open-ended and multiple choice focus group questions to guide the last data collection piece. These questions were designed with the help of my advisors to gain a greater understanding of the insight of the extended group of participants. These questions were used to fully explore the use of technology from the teacher's point of view.

### **Analysis of Data**

This Record of Study includes mixed-methods research data analysis as outlined in Table 6. A variety of techniques were used to interpret the data collected. Frequency counts were noted and content analysis was used to identify common themes. Analysis of descriptive data from the surveys was summarized by looking for patterns including using the means, frequencies and measures of variability. In addition, I looked at the quantitative data presented through the teacher lesson plans to identify event history and frequencies then compared to the post-survey quantitative results. Data analysis

included coding of surveys responses and using the constant comparative method and analysis of quantitative data using descriptive statistics.

Table 6

*Data Source and Analysis Leading to Conclusions about the Success of the Problem Solution with the Goal of Identifying Teacher Perception of Teaching Digital Citizenship.*

Data Source	Analysis
Survey	Quantitative analysis of means, frequencies and measures of variability. Qualitative analysis of descriptive responses to identify common themes of understanding of digital citizenship and individual perspectives in regard to teaching digital citizenship skills in the classroom.
Lesson Plan Analysis	Frequency chart to identify quantity of type and purpose. Comparison of frequency charts using double bar graph.
Professional Development Sessions	Review of attendance, agendas and notes with open coding.
Focus Group	Analysis of collected responses from focus group questions through coding.

## Timeline

- Spring 2014 –Met with field advisor to discuss initial ideas. Informally discussed technology use in the classroom with four teachers. Discussed and received feedback regarding possible problem solution from classmates and advisors.
- Summer 2014 – worked with advisors to design survey
- August 2014 – completed application to conduct research from school district

- October 2014 – received permission from school district to conduct research project. Submitted application to IRB.
- January 7, 2015 – received expedited approval from IRB
- January 22-31, 2015 – collected participant consent forms (N=31)
- February 2-6, 2015 – pre-survey completed
- February 2015
  - Review lesson plans for quantity, type and purpose of technology use
  - Digital citizenship professional development sessions
- March 2015
  - Review lesson plans for quantity, type and purpose of technology use
  - Post survey (N=20 completed pre, post survey, participated in professional development sessions and allowed access to lesson plans)
- June 2015-April 2016 – Completed and received approval of ROS proposal from advisors and committee.
- November 2015 – Submitted amendment and Continuing Review to IRB for permission to continue study with a sub-group of 8 study participants teaching a single grade-level who have indicated a desire to continue working together to develop use of instructional technology in classroom lessons.

- December 2015 – Received approval for amendment and continuing review
- January 2016-April 2016 - Participant-driven professional development session (N=8)
- May-August 2016 – Collected focus group analyzed data, met with advisors, and received feedback .
- August-September 2016 – finish ROS, send to committee and defend.

### **Issues of Reliability, Validity, Confidentiality, and Other Ethical Concerns**

Potential threats to reliability and validity stem from the differing backgrounds of the participants and the subjectivity of participant perceptions. Reliability was established through the design of data collection instruments under the advisement of my co-chairs and the review by my field advisor prior to use.

To address validity concerns, the same method of data collection was used with each study participant to ensure validity through member checking by confirming the accuracy of the data by participants. Data was coded and recoded to safeguard validity in identifying common themes.

Confidentiality was an integral part of gathering data and establishing the small group extension. Data collected is secured and stored in a locked location with all coded with a study identification number to maintain confidentiality of participants.

Ethical concerns were addressed through the application and subsequent approval for this research was granted by the local school district with the condition of anonymity and from the IRB at Texas A&M University.



## CHAPTER VII

### RESULTS

#### **Introduction**

The purpose of this study was to identify if certified faculty members perceived a need to teach digital citizenship skills. The first part of the study identified the perceptions of certified faculty regarding digital citizenship issues through the analysis of teacher responses to understanding of digital citizenship, the rationale for teaching it and technology use in the classroom. The second part of the study identified changes in understanding of digital citizenship after professional development. Research questions were answered from survey responses, lesson plan analysis, professional development anecdotal notes, and focus group question responses.

#### **Research Findings**

The findings will be presented using the guiding research questions. Quantitative and qualitative data will be used to examine responses to the following research questions:

1. As a teacher, are you familiar with the concept of digital citizenship?
2. Do you teach digital citizenship? If so, how?
3. How can teachers help other teachers with digital citizenship skills and lessons?

These questions were used to identify teacher perceptions of digital citizenship issues and allow teachers to contemplate how digital citizenship could be taught resulting in the

establishment of a professional learning community based upon needed professional development.

In the spring of 2015, a confidential survey was distributed and completed including open ended and scaled responses to identify understanding of digital citizenship and individual perspectives in regard to teaching digital citizenship skills in the classroom. The online survey was available to all potential participants. Participants responded to demographic questions by asking questions about grade level assignment, number of years teaching in current role, total number of years of experience and highest degree. The survey continued by asking yes-no question of familiarity with the term digital citizenship and literacy. If affirmed, participants were asked to define digital citizenship in their own words. Participants were asked if they taught digital citizenship and if so, provide a few examples. Using the scale of uncertain, beginner, confident on my own or capable of teaching others, respondents were asked to rank their ability to use technology and identify appropriate instructional technology. Participants responded if they felt they had a need for professional development in the use of technology with the identification of resources currently used within the classroom. The survey ended with participants providing examples of when technology has worked, when technology has been a problem and suggestions for future technology needs to be purchased, if funds became available.

The survey was coded and responses remained confidential to allow participants to fully share understanding and perspective related to teaching digital citizenship skills. Lesson plans were also analyzed for quantity, type and purpose of technology use in the

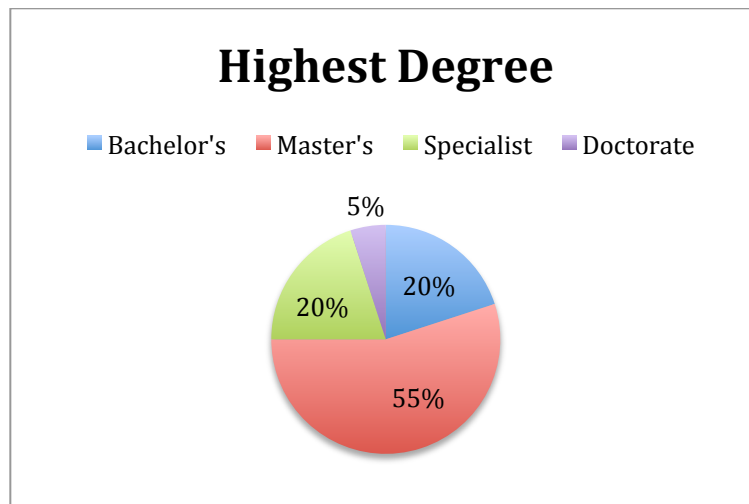
classroom. Technology use as indicated through the lesson plans were compared to survey results as an additional analysis of the perception of the importance of digital citizenship.

Participants then were invited to short professional development sessions related to digital citizenship using the Elementary School Curriculum Training materials from Common Sense Media. Three sessions were held to establish a common definition for digital citizenship used within the building, explore the role of the teacher in teaching digital citizenship and collaborate in sharing resources. Participants were then invited to take the initial survey sans the demographic questions as a measurement of changes in perception. In addition, lesson plans were analyzed after participation in the professional development sessions.

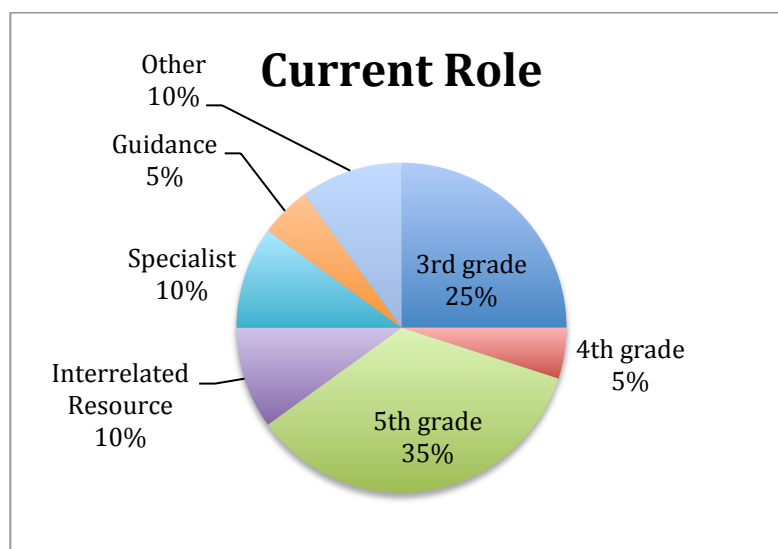
Twenty-two participants completed the initial and post survey and attended all the professional development sessions. Of these, twenty certified teachers had electronic lesson plans accessible for review. For the sake of the analysis of the study results, only the twenty participants that had accessible lesson plans to compare to survey data are discussed in the results of this study.

Of the twenty participants experience in the classroom ranged from 6 to 30 years with an average of 16.7 years of experience. As shown in Figure 1, 55% earned a master's degree, 20% earned a bachelor's, 20% earned a specialist degree, and 5% earned a doctorate. Figure 2 illustrates the role filled during study participation included teachers of third, fourth and fifth graders in addition to specialists, guidance, and

interrelated resource personnel. Two participants classified their role as “other” since they fulfilled multiple roles.



**Figure 1** Highest Degree



**Figure 2** Current Role

As shown in Figure 2, 35% of the participants represented 5<sup>th</sup> grade followed by 25% representing 3<sup>rd</sup> grade and 4<sup>th</sup> grade with 5%. However, it is important to note that interrelated resource personnel, specialists, guidance counselors and those identified as other, consist of a total of 35% of the study participants work with multiple grade levels. Therefore, 5<sup>th</sup> grade could be represented by 70%, 3<sup>rd</sup> grade by 60% and 4<sup>th</sup> grade by 40% of certified members of the study. The underrepresentation of 4<sup>th</sup> grade could be a byproduct of focus placed upon 3<sup>rd</sup> and 5<sup>th</sup> graders due to participating in high stakes testing during those academic years in this state.

To fully understand the changes in the survey responses, it is important to outline the professional development sessions. The materials used were from Common Sense Media designed specifically for educators in grades 3-5. The materials were developed to train teachers how to teach digital citizenship to students in these grades. The training consists of 15 lessons designed to “teach students how to participate safely, responsibly, and respectfully in today’s digital world” (Common Sense Media).

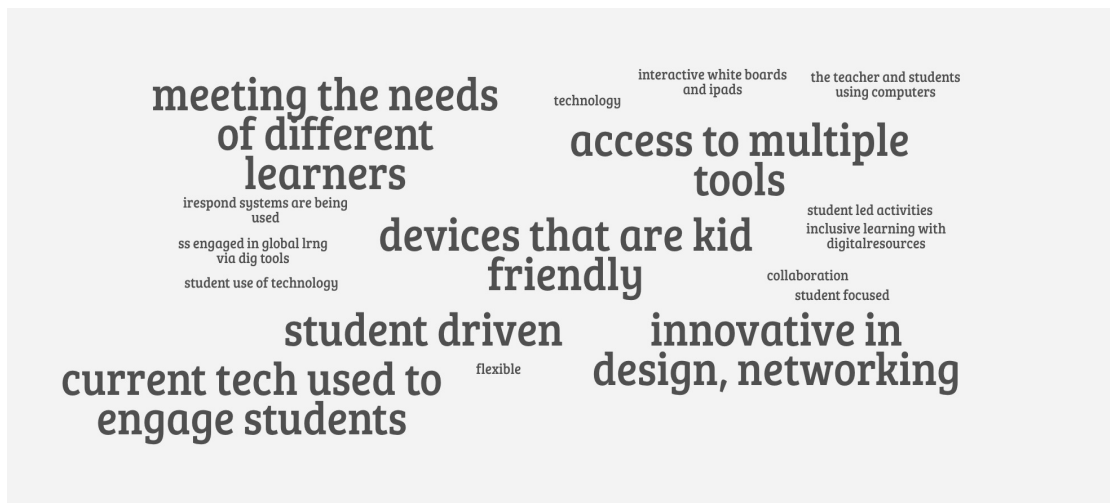
Since professional development sessions were limited, the first session was used to discuss and define digital citizenship. The session began with my thanking participants for attending and set the purpose for meeting using the video “Digital Life 101” (2013). Conversation quickly began with noting how quickly technology is changing in the short time since the video was published in 2013. Conversation continued with sharing the definition of digital citizenship used by Common Sense Media as “the practice of navigating the digital world safely, responsibly and ethically”.

The All Digital Citizens poster, Figure 3, is a resource from Common Sense Media and was adopted as a student-friendly introduction by the group and helped to establish a realistic focus for the duration of the mini professional development sessions.



**Figure 3** Digital Citizenship Poster  
Reprinted with Permission from Common Sense Media, 2016.

I shared the eBook outline with the group. We talked about the vast resources available to educators and worked together to set a purpose for the second meeting of discussing the role of classroom teachers in digital citizenship. To allow for multiple participants to be heard, I used [Answergarden.ch](http://Answergarden.ch). Participants were asked how they envision a digital classroom.



**Figure 4** Participant Responses

Session one ended with open discussion and questions. The date and time was set for the second session with a time frame of 20-30 minutes sessions.

The next session took place two weeks later. This session began with an open discussion using the word cloud created using Answer Garden during the first meeting. This session quickly became much more animated with participants noting that the poster was visible in many places throughout the building. This was of particular interest given this was done innately by participants.

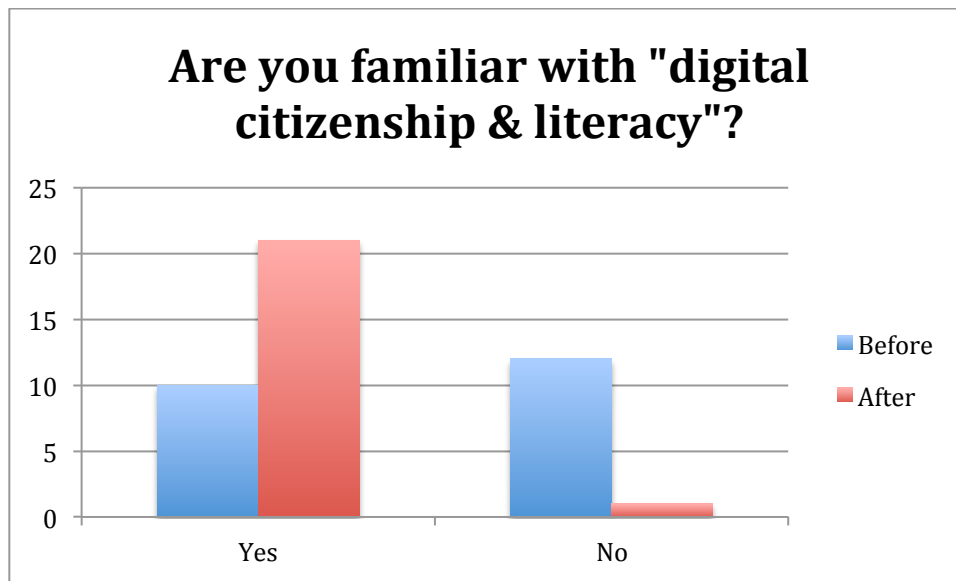
The group then watched the short video “Social Media Revolution 2015 #Socialnomics” (Qualman, 2015). One participant stated, “It is time to stop fighting technology and learn to truly integrate it into the classrooms. It is a part of student’s lives at home and should be just as accessible at school.” Conversation continued with the barriers to using more technology in the classroom. Most noted were the time constraints in planning, difficulty accessing sites within the building and lack of training. As a

group, the decision was made to use the last professional training session as an opportunity to share resources used.

During the final session every participant came with at least one application or resource. This session was most interactive as I had the opportunity to step back and watch the teachers share their knowledge with each other. The meeting concluded with revisiting the Common Sense Media Scope and Sequence for teaching digital citizenship to students in grades 3-5. This allowed the group to work together to develop a plan of responsibility. Classroom teachers planned to work in conjunction with specialists by having the technology teacher take on the areas of Internet safety then privacy and security and the librarian to take information literacy then creative credit and copyright. The final session ended with thanking the participants and asking them to complete the post-survey sent out immediately after the session.

After receiving the survey results, data was compiled and then compared to the survey results taken prior to the professional development sessions. The first was to measure the change in the familiarity with the term digital citizenship. Prior to the sessions, only 50% of the participants stated they were familiar with the term whereas the percentage increased to 95% after the sessions.



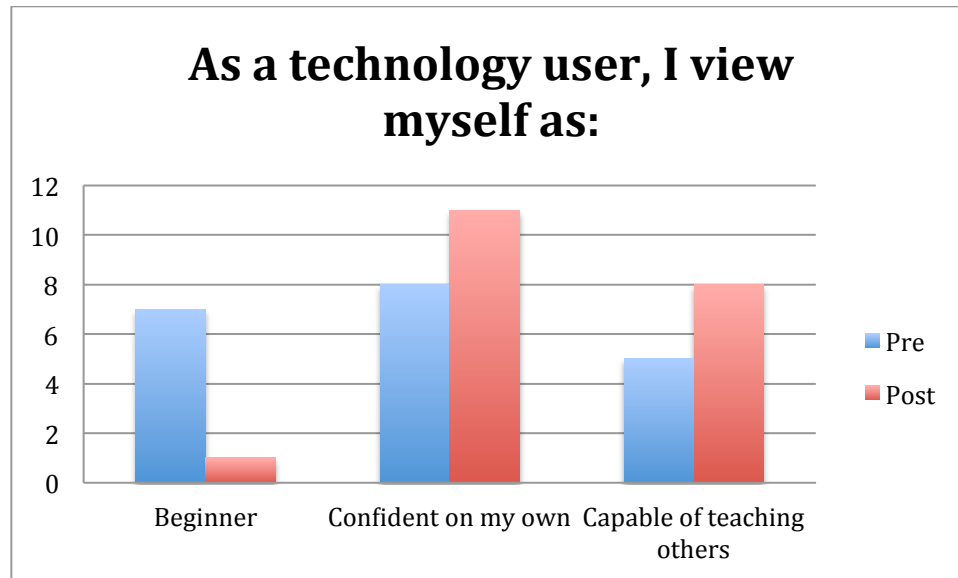


**Figure 5** Familiar with Digital Citizenship Terminology

The next question was if the participants taught digital citizenship. Prior to the sessions, 25% stated they taught digital citizenship lessons which increased to 90% after. This was mostly due to the review of the scope and sequence of the lessons and realizing that some parts of the curriculum were covered in classroom lessons. Specifically, in third and fifth grades, an outside organization through the local hospital sponsors an in-house fieldtrip covering Internet safety.

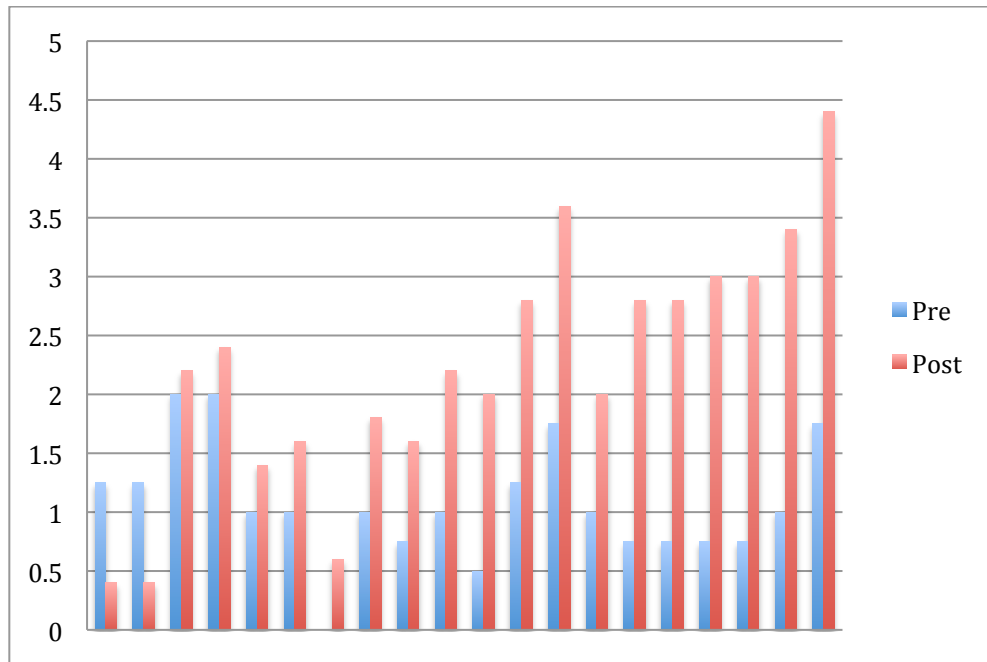
An important aspect of digital citizenship is the integration in the classroom. Teacher confidence was evident in responses as illustrated in Figure 6. Initially 25% of responded as capable of teaching others, 40% as capable on my own and 35% described themselves as beginners. However after the sessions, 40% of responded as capable of teaching others, 55% as capable on my own and 5% described themselves as beginners.

This change became most evident during the last session where knowledge was being shared between participants.



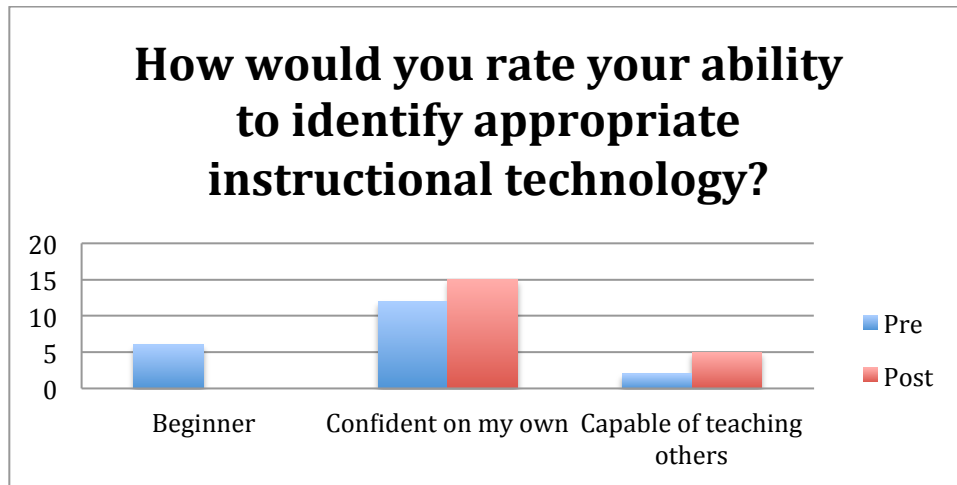
**Figure 6** Technology User Self-Assessment

This was also evident in the increase in technology used in the classroom as noted in the teacher's lesson plans. Prior to the sessions, I analyzed the lesson plans for quantity, type and purpose. A double bar (see figure 7) graph to visually compare changes by participant was created using data collected. There was a notable increase in 90% of participants. Prior to the sessions, the average use of technology in weekly lesson plans was 1.075 each week whereas after the sessions the average jumped to 2.22 uses of technology as indicated in the teacher's lesson plans.



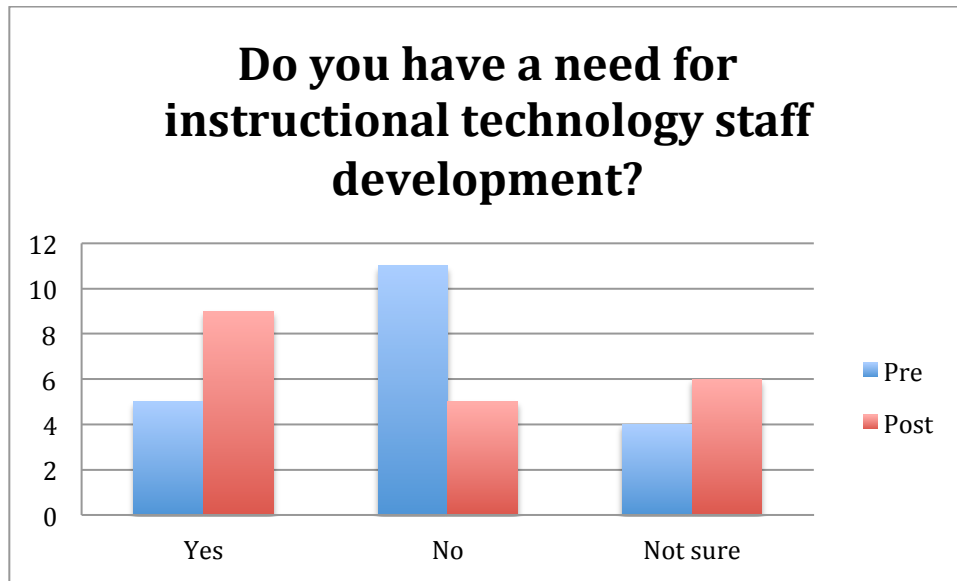
**Figure 7** Average Classroom Technology Use Per Week by Participant

This positive increase was further supported by the self-assessment of the ability to identify appropriate instructional technology. Prior to the sessions, 30% identified as beginner, 60% as confident on my own and 10% as capable of teaching others. Again, these increased to 75% as confident on my own and 25% as capable of teaching others. One participant stated, “I didn’t realize how much I knew until I had the opportunity to share [with my colleagues].”



**Figure 8** Ability to Identify Instructional Technology Self-Assessment

The final response was most indicative of the need for instructional training and support to assist teachers in developing digital citizenship skills with students. Prior to the learning sessions, only 25% indicated they had a need for instructional technology staff development, 55% indicated no need and 20% were uncertain. After working with the participants in a collaborative manner, 45% indicated a need and 30% were uncertain. Of the participants, 25% indicated no need – a drop of 30%.



**Figure 9** Need for Staff Development

In completing the post- assessment analysis, it became obvious that there was a clear need for technology training and support to assist teachers. Although the main concern was being forced into another meeting, some teachers showed a great deal of interest in continuing the study. Therefore, I amended my IRB application to continue the study with a sub-group of 8 study participants teaching a single grade-level who have indicated a desire to continue working together to develop use of instructional technology in classroom lessons. The continuation of the initial study with a smaller focus group allowed for more in-depth discussion allowing group members to thoughtfully respond and discuss issues surrounding technology use and digital citizenship skills. Focus group members had the same role and grade level responsibility within the building.

The continuation of these sessions took place from January to May 2016 and was supported by the building administrator. Specifically, a district technology specialist was moved to the building after discussing the initial findings. The district technology specialist supported the teacher professional development sessions including sessions based upon teacher needs. The small group continuing with the study met the addition of staff member in a positive manner. One stated, “I am happy to have someone else in the building to ask that is not tied to a classroom.” Additional support was added by another teacher who shared her surprise when the technology support specialist was in her room to help within minutes of being asked for help by email.

Small group meetings of the extended group focused upon sharing uses of technology in the classroom and digital citizenship lessons used through the Common Sense curriculum. The group reflected upon student responses to lessons and supported the lessons provided by the specialists. One participant stated, “It now feels like technology is an extension in my classroom rather than something I have to fight.”

The group shared tips on setting up classrooms to support the use of technology. The group decided to establish a set of lessons to begin the following school year of how to use technology including caring for equipment and safe searches. Although this was to be covered, the group agreed the lessons should be retaught on a yearly basis and reinforced consistently throughout the year. Specifically, the group decided to address the principal to establish a consistent protocol for students not adhering to the acceptable use policy. The principal promised to take the request into consideration.

During this time, a district specialist conducted a parent seminar. Sadly, only 10 parents attended; however, all small group participants were in attendance showing their continued and dedicated interest. After the meeting, the small group convened to discuss resounding thoughts. One participant shared she was reminded that “forbidding technology often encourages a child to find alternative methods to access”. Another participant summarized the importance of the continued interest in the integration of technology and the importance of digital citizenship by reflecting that just because a student is a “digital native does not mean that they have digital wisdom”.

The extended group had the opportunity to meet with the technology support specialist on a weekly basis to develop their individual skills. As the relationship grew between the group members and the support specialist, the dynamics changed from a sense of anxiety to an even stronger support system within the building. The support specialist shared:

It takes the leadership making it [technology support] a priority to have new technology in classrooms (hardware & software), but also to understand that training is a key part of the equation. If technology integration into classrooms is truly successful, it takes support and training opportunities. I hope the master plan will continue to keep our team accessible to classroom teachers. Teachers and students benefit from the professional development and support our team provides. (personal communication, March 30, 2016)

This collaboration was an invaluable asset to this study and the continuation of the school's initiative to incorporate technology in all aspects of the classroom including parent communication and student collaboration.

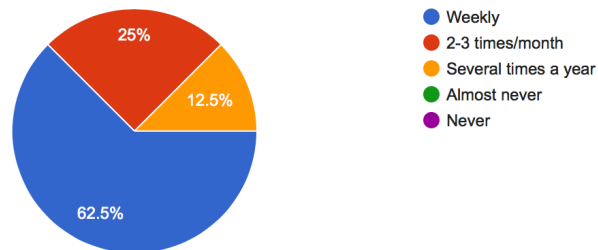
The study concluded with a final meeting with all eight extended group participants. Although the study had come to an end, all agreed that the group would continue to work together to continue to develop technology rich lessons focusing upon developing digital citizenship. During this final meeting guided by the focus group questions (see Appendix E) participants shared their favorite student projects and resources as a means of sharing how technology was used in the classroom.

The use of technology was most influenced by the ability of the teacher to navigate the technology and effectively integrate it into the classroom curriculum. Teachers agreed that technology plays an integral role in the classroom since it is such an important and all encompassing part of the student's lives. One teacher brought up the quote by Jennifer Fleming, "Teaching in the Internet age means we must teach tomorrow's skills today." The group shared that no part of technology integration or the importance of digital citizenship has ever been addressed in their teacher preparation program or professional development prior to this study. The group affirmed that technology plays a very important role in the student's academic success. In order to be successful in upper grades and beyond, the students must learn the necessary skills including appropriate use during the elementary school years.



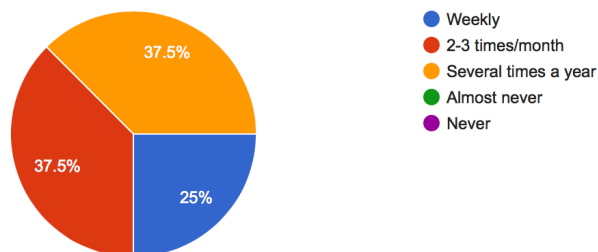
Lastly, the participants were asked to respond to three questions individually:

How often do your students use technology to gather information? (8 responses)



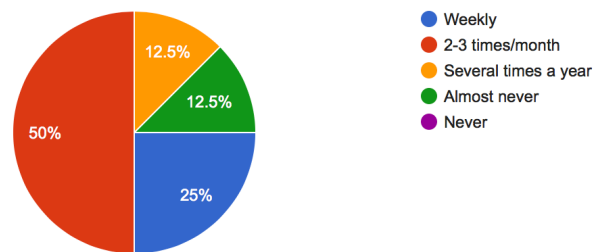
**Figure 10** Student Use of Technology to Gather Information

How often do your students use technology to create a product? (8 responses)



**Figure 11** Student Use of Technology to Create

How often do your students use technology to collaborate or communicate with peers?  
(8 responses)



**Figure 12** Student Use of Technology to Communicate

In analyzing the data from these three questions alone, it is a marked increase of use of technology within the classrooms represented. Students are actively engaging with the technology on a regular basis allowing for creation and collaboration.

## CHAPTER VIII

### CONCLUSIONS

This study identified the perceptions of certified staff regarding how teachers teach digital citizenship while incorporating technology in the classroom. Through professional development related to digital citizenship skills, teachers were able to more effectively select and utilize technology within the classroom. In conducting an initial survey, professional development sessions, lesson plan analysis and a post survey the increase in the use of technology was evident in a very short span of time. During this period, there was also the development of a shared understanding of the terminology of digital citizenship.

Communication improved among staff members through the development of a learning community with a shared purpose – to help the students make better use of technology tools while ensuring they know how to use technology effectively and appropriately. Furthermore, in using the lessons designed by Common Sense Media, teachers did not feel burdened to incorporate the lessons.

In addition, the participants were vocal in the need for continued professional development in using technology but asked that professional development be based upon individual needs. The administration responded by adding a technology specialist to the building for a semester. With an amendment to the IRB application, the study continued with a small group who engaged in weekly sessions with the technology specialist who was added to the staff.

The small group reinforced the findings initially set forth. Professional development is key to the implementation of digital citizenship lessons. In allowing teachers to tailor professional development based upon personal needs, the use of technology increased. Most importantly, the use of technology increased from mostly information gathering to include product creation and collaboration.

The research questions related to the familiarity with the concept of digital citizenship, teaching digital citizenship and helping teachers develop digital citizenship and skills. The questions focused on understanding and perception of digital citizenship skills. Through the analysis of current understanding of digital citizenship with the development of a shared focus resulted in a collaborative effort to help teachers to develop and implement digital citizenship lessons in their respective classrooms.

Although limited in sample size, the significance of this study is relevant to current research. There is a definitive need for the development of digital citizenship skills for students at a younger age than ever before. As noted in this study, the digital citizenship curriculum is only implemented when teachers feel supported in the professional development endeavors to develop their own skills to effectively implement the use of technology in their classrooms. Establishing the collaborative professional development community to assist in developing digital citizenship skills is based upon the needs of the students to effectively and appropriately use technology. The impact upon the students in such a classroom may be the focus of a future study.

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# APPENDIX A

## IRB APPROVAL DOCUMENT

DIVISION OF RESEARCH



**DATE:** November 11, 2015

**MEMORANDUM**

**TO:** Robin Rackley  
TAMU - College Of Education & Human Dev - Teaching, Learning And Culture

**FROM:** Dr. James Fluckey  
Chair, TAMU IRB

**SUBJECT:** Expedited Approval

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**Study Number:** IRB2014-0722D

**Title:** Certified Staff Perception of Digital Citizenship

**Date of  
Determination:**

**Approval Date:** 01/07/2015

**Continuing  
Review Due:** 10/01/2016

**Expiration  
Date:** 11/01/2016

**Documents  
Reviewed and  
Approved:** Only IRB-stamped approved versions of study materials (e.g., consent forms, recruitment materials, and questionnaires) can be distributed to human participants. Please log into iRIS to download the stamped, approved version of all study materials. If you are unable to locate the stamped version in iRIS, please contact the iRIS Support Team at 979.845.4969 or the IRB liaison assigned to your area.

**Document of Consent:** Written consent in accordance with 45 CF 46.116/ 21 CFR 50.27  
**Waiver of Consent:**

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**Comments:**

- Research is to be conducted according to the study application approved by the IRB prior to implementation.
- Any future correspondence should include the IRB study number and the study title.

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Investigators assume the following responsibilities:

1. **Continuing Review:** The study must be renewed by the expiration date in order to continue with the research. A Continuing Review application along with required documents must be submitted by the continuing review deadline. Failure to do so may result in processing delays, study expiration, and/or loss

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APPENDIX B  
TECHNOLOGY SURVEY

1. What is your current role?
  - ☐ 3<sup>rd</sup> grade
  - ☐ 4<sup>th</sup> grade
  - ☐ 5<sup>th</sup> grade
  - ☐ Interrelated Resource
  - ☐ Specialist
  - ☐ Guidance
  - ☐ Administration
  - ☐ Other
2. Years of teaching experience in current role/grade?
3. Total teaching experience?
4. Highest Degree?
  - ☐ Bachelor's
  - ☐ Master's
  - ☐ Specialist
  - ☐ Doctorate
5. Are you familiar with the term "digital citizenship and literacy"?
  - ☐ Yes
  - ☐ No
6. If so, define digital citizenship in your own words.

7. Do you teach digital citizenship?
- ☐ Yes
  - ☐ No
8. If so, please provide a few examples.
9. As a technology uses, I view myself as:
- ☐ Uncertain
  - ☐ Beginner
  - ☐ Confident on my own
  - ☐ Capable of teaching others
10. How would you rate your ability to identify appropriate instruction technology?
- ☐ Uncertain
  - ☐ Beginner
  - ☐ Confident on my own
  - ☐ Capable of teaching other
11. Do you have a need for instructional technology staff development?
- ☐ Yes
  - ☐ Not Sure
  - ☐ No
12. If so, what area(s) do you need professional development related to instructional technology?
13. Your first and initial for coding:

14. Please identify the technology you use in your classroom at least twice each week:

- ☐ Interactive WhiteBoard
- ☐ Laptop
- ☐ Desktop
- ☐ Projector
- ☐ VCR/DVR
- ☐ Podcast
- ☐ Blog
- ☐ Other

15. Which of the following technology resources do you use to support your teaching?

- ☐ Online lesson plans
- ☐ Web-based activities
- ☐ Parent/student class information
- ☐ Online video
- ☐ Online discussion forum for teachers
- ☐ Cloud Storage
- ☐ Mobile Apps
- ☐ Blogs
- ☐ None of these
- ☐ Other

16. What would you be interested in learning more about?

- ☐ Online lesson plans
- ☐ Web-based activities
- ☐ Parent/student class information
- ☐ Online multimedia
- ☐ Cloud Storage
- ☐ Mobile Apps
- ☐ Blogs
- ☐ None of these
- ☐ Selecting technology resources for student use
- ☐ Other

17. Please give an example of when technology has helped in the classroom.

18. Please give an example of when technology has been a problem in the classroom.

19. If our school would be awarded a technology grant, what technology would you like to see purchased or updated for our school?

20. Are you willing to take part in a follow-up interview if needed?

- ☐ Yes
- ☐ No

## APPENDIX C

### TECHNOLOGY USE IN LESSON PLANS

Participant Code	Pre Quantity	Pre Average/week	Post Quantity	Post Average/week	+/-
14	5	1.25	2	0.4	-1.25
21	5	1.25	2	0.4	-0.85
3	8	2	11	2.2	0.2
8	8	2	12	2.4	0.4
26	4	1	7	1.4	0.4
1	4	1	8	1.6	0.6
15	0	0	3	0.6	0.6
9	4	1	9	1.8	0.8
4	3	0.75	8	1.6	0.85
31	4	1	11	2.2	1.2
28	2	0.5	10	2	1.5
10	5	1.25	14	2.8	1.55
16	7	1.75	18	3.6	1.85
27	4	1	10	2	2
22	3	0.75	14	2.8	2.05
24	3	0.75	14	2.8	2.05
7	3	0.75	15	3	2.25
25	3	0.75	15	3	2.25
11	4	1	17	3.4	2.4
5	7	1.75	22	4.4	2.65
	86	21.5	222	44.4	23.5

Pre – 4 weeks

Post – 5 weeks

## APPENDIX D

### PROFESSIONAL DEVELOPMENT SEMINAR AGENDAS

Meeting – February 12, 2015 - 25 minutes

1. Introduction & thanks
2. Identify purpose of gathering – video clip <https://youtu.be/LUtFm05j6eg>
  - a. What is digital citizenship?
    - i. What is it?
    - ii. Common Sense Media:  
<https://www.commonsensemedia.org/educators/training>
      1. Videos
      2. EBook
  - b. What is the role of classroom teachers in digital citizenship?
    - i. Answer Garden response
  - c. Open Discussion
3. Next meeting: February 26 - plan to keep meetings to 20-30 minutes

Meeting #2 – February 26, 2015

1. Revisit purpose: digital citizenship & role of the teacher
  - a. Digital citizenship definition
  - b. Answer Garden responses
2. What is the teacher's role in digital citizenship?



- a. Watch clip: 2:18 Socialnomics 2015 <https://youtu.be/jottDMuLesU>
  - b. Roles & responsibilities
- 3. Open discussion

Meeting #3 –March 12, 2015

- 1. Revisit purpose: digital citizenship & role of the teacher
  - a. Digital citizenship definition
  - b. Addressing barriers
- 2. Sharing Resources

Watch for survey link & instructions in email

APPENDIX E

FOCUS GROUP QUESTIONS

Engage:

1. What interest do you have in technology?
2. How do you use technology in your classroom?

Explore:

3. What has influenced your use of technology in the classroom?
4. What role do you feel technology plays in the curriculum?
5. Describe what you think technology plays in a student's learning.
6. To what extent do you feel the building/district supports the support necessary for teachers to meet their student's needs?

Exit:

Complete individual survey:

	Once a week	2-3 times a month	Several times a year	Almost never	Never
How often do your students use technology to create a product?					
How often do your students use technology to collaborate or communicate with peers?					
How often do your students use technology to gather information?					

Is there any additional information you would like to share about the use of technology and student learning?

## APPENDIX F

### CONVERSATIONS WITH STAKEHOLDERS FROM INTERNSHIP II

#### **Data Collection**

January 15, 2015

Administration Office

2:45-3:45 pm

I met with administrator to discuss the completion of Internship II and plan to approach the staff to participate in the study. Administrator suggested speaking to three specific members of the staff with concerns related to technology and digital citizenship. We also discussed the logistics of coordinating communication while keeping my supervisor apprised throughout the course of the study.

Survey – how does she want it sent? School email ok?

- 5 minute infomercial type presentation at next staff meeting
- Tuesday Team Time presentations – couple with LearnZillion information
- Web-based would be ideal

Suggestions for contacts?

- Technology Teacher – recently shared concern about NETS
- Advanced Learning Teacher – focus on social media with kids
- Media Specialist – focus on technology & communication with community

The Plan?

- Email communication – use school email

- Copy principal on all communications
- Use Blackboard Portal to set up secure site for communication

#### Summary of Conversation

The meeting set with administrator was set to have her sign the Internship II Agreement for Partnership form. We reviewed the expectations of Internship II given that IRB approval has been received and I am now able to move forward with the study.

We discussed that I need to address the staff to ask for participation in the study and collect Staff Consent Forms. We agreed that I would address the staff at the next faculty meeting for approximately five minutes. Consent forms would be distributed with a location near the staff mailboxes for collection.

Once consent has been received, I would send out the survey link. Administrator agreed that using my school email is best given the spam filter in place and the ability to assure that all participants consenting receive communication. She also suggested planning for release, perhaps using one of my personal days, to present LearnZillion information during team meetings and gather information. She prefers the idea of using web-based communication to be able to easily communicate with participants and suggested the use of the school Blackboard site for secure communication. She has asked to be included on any electronic communication with participants.

Administrator also specifically noted three staff members that have specific experience or concerns about the issue of digital citizenship. The school technology teacher recently shared concern about NETS and the elimination of the use of the standards at the elementary level. An Advanced Learning Program teacher, teaches with

a focus on social media with kids. The media specialist focuses on technology and communication with community.

**Data Collection - Problem Situation**

Visit 1:	1/20/15	School	2:45-3:00 pm
Visit 2:	1/21/15	School	3:00-4:30 pm
Visit 3:	1/22/15	School	3:00-3:45 pm

J.H. is one of our school counselors. She has 16 years of teaching experience; however, has only been in this school building for two years. She noted that she is not familiar with the term “digital citizenship”. She views herself as a beginner in the use of technology and a beginner in her ability to rate appropriate educational technology. She states, “Any and all staff development would be helpful.” She feels that students love using technology relating to lessons and has experienced issues with technology when it does not work as planned.

K. W. is a 5<sup>th</sup> grade teacher with eighteen years of experience with six in her current role. She defines digital citizenship as, “People or children who use ethical behavior while using digital devices and the rights and responsibilities while online.” She teaches digital citizenship by using student friendly sites and modeling positive behavior online. She feels that she is confident in her ability to use technology and select educational technology tools. She is unsure if she has a need for additional staff development related to digital citizenship; however, is interested in learning more about web-based activities, online multimedia and cloud storage. Her primary concern is the lack of Internet support within the building.

T. S. is an interrelated resource teacher with 13 years of experience including 6 at her current position. She is unfamiliar with the term digital citizenship. She feels that she is confident in her ability to use technology and select educational technology tools. She is uncertain of her need for professional development related to technology; however, is interested in learning more about web-based resources. Her primary concern is the issues equipment such as headphones or outdated laptops with so many students using the very limited equipment available.

The Advanced Learning Program (ALP) teacher with 16 years of experience. In his words, "Digital citizenship is an outgrowth of what was previously known as "netiquette". Rules/guidelines for proper online behavior and common courtesy toward other users. As digital footprints have become wider via the use of social media sites, digital citizenship has expanded to include what to post or share with others and the development of "web sense" similar to "street sense". This includes: what to personal information to share and what not to share, protecting your online identity from theft and dealing with online bullying." He feels confident in his ability to teach others how to use technology and select appropriate technology tools. He expressed the concern "porous circles of social network" especially concerning the relationship to technology-based communication and the impact upon the school community. For example, someone could write an email in confidence then the email would be shared throughout multiple social networks impacting the relationship with the community and the school.

**Data Collection** –nature of the problem, ideal situation, and appropriate solution

Visit 1:	1/30/15	School	8:15-9:45 am
Visit 2:	2/2/15	School	6:45-7:15 am
Visit 3:	2/4/15	School	12:45-1:45 pm

C.F., 5<sup>th</sup> Grade Teacher

C.F. and I have a great deal of time to talk as we are located near each other in the building and have taught the same grade level for the past seven years. She feels the nature of the problem lays with the inability for teachers to truly control their own classrooms. She is very upset that every aspect of a teacher's life seems to be micromanaged with more and more expected each year. Relating to digital citizenship, she feels that too often children are given access to a variety of tools without clear expectations or guidelines for behavior or use. She feels this is yet another aspect that falls into the teacher's lap because "no one else will take responsibility". To her, the ideal would be that all students were taught to use technology at home and come to school with the skillset to use for academic work.

A. D., 4<sup>th</sup> Grade Teacher

A.D. came to the school four years ago and is a bundle of energy even after 24 years in the classroom. She has a "can do" attitude but is against putting kids in front of technology just for the sake of using technology. She visualizes an ideal as working together as a staff to create lessons that can be individualized by teachers for students.

She feels that teachers are pulled into so many directions that the ability to do the best work is often impossible. She hopes that we have an opportunity to create a multiyear professional learning community to address the use of technology.

#### Media Specialist

Prior to discussing digital citizenship with media specialist, I had the opportunity to watch her teach a class about the use of technology in research. This segued easily into how teachers can incorporate the same type of lesson into their own classrooms. As the media specialist on the specials rotation, she sees how often students do not transfer lessons learned in the classroom to other areas. She feels passionately that we must partner with the home to help students become digital citizens. Her idea is to create a professional learning group focused upon identifying current electronic resources for teachers to incorporate into their classrooms.